

**MINNESOTA TURF SEED COUNCIL  
NEWSLETTER  
July 11, 2018**

**RYEGRASS GROWING DEGREE DAYS (GDD)**

Ryegrass GDD will be tracked for the 2018 growing season with comparisons to the previous six years. A base temperature of 32 degrees F will be used for ryegrass (T-Base = 32 F). Reported GDD are based on the total accumulation from the beginning of the calendar year to the current date.

- Year to date, GDD = 2,297 (Table 1)
- Average temperatures for the second week of July, high of 78 F and low 54 F
- Average GDD accumulation for first week of July = 243 (34.7/day)
- Current 10 day forecast projects daily highs in the mid 80's and lows in the low 60's
- Projected 10 day GDD = 397 (39.7day)
- Current 10 day forecast continues to projects warmer than average temperatures (+5 GDD/day)

Table 1. Growing degree days (GDD), March - July 2012 to March - July 2018 near Roseau MN.

<b>Year</b>	<b>2018</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>	<b>2012</b>	<b>2018 vs. 17</b>
March	0	90	38	119	0	0	304	-90
April	184	258	263	367	159	80	370	-74
May	815	679	765	659	654	640	726	+136
June	1,007	917	945	941	964	975	979	+90
July		1,095	1,123	1,147	1,066	1,088	1,230	
July 1-8	291							
Total	2,297	3,066	3,134	3,030	2,843	2,783	3,609	
*July 9-18	397							

\* Forecasted GDD at Roseau for the next 10 days.

**GENERAL CROP CONDITION**

Selected perennial ryegrass fields are beginning to turn color which is a sign of physiological maturity. By definition, physiological maturity is maximum dry matter accumulation in plants. Once a plant has reached physiological maturity, the plant will continue the dry down process until swathing and harvest. Why are some areas of a field more mature than others? In addition to the normal maturation process when ryegrass turns from green to brown, other causes for differential maturity in ryegrass include: low soil fertility, excessive nitrogen levels in soil, soil compaction, variable soil types within a field, moisture stress, variable plant stands, straw load from previous crops, leaf diseases, insect pressure, and other plant stressors.

Based on previous year's records, ryegrass swathing will begin after the accumulation of approximately 2,800 GDD. As of July 8<sup>th</sup>, year to date GDD accumulation was 2,297. When will swathers be rolling in ryegrass fields? If ryegrass plants had healthy crowns this spring with normal application of fertilizer, by using the long term average accumulation of 34 GDD/day, ryegrass swathing could begin in approximately two weeks. Warmer or cooler than average temperatures will influence this timeline.

## **CROP MANAGEMENT**

When to swath ryegrass? That seems like an easy question, when it is ready! When to swath ryegrass and the timing of ryegrass swathing, is in large part based on science, but another part is based on gut feel. It seems our eyes are drawn to the most mature areas of the field. If cut too early, ryegrass seed samples will be light. If wait too long, a consequence will be increased seed shatter. When making decisions on when to cut ryegrass, make sure a **representative sample is taken from the entire field not just areas that are most mature.** One method to get a representative field sample is to take samples from areas that look mature, from areas that are intermediate and from areas of the field that look green. Note the percentage of the field in each of these categories. This will give you a good overall field estimate of maturity. Once these samples are collected seed moisture can be determined using a microwave oven. If possible, delay swathing until moisture content of the seed is 35 to 40%. Seed moisture content is determined rubbing the seed from the spike and using the microwave oven to remove the seed moisture.

Caution: In addition to the seed sample, place a small amount of water in a microwave safe container. This will prevent the seed from exploding in the oven. Start with a predetermined seed weight (10 grams) and set the microwave oven for 1 to 1.5 minutes. Continue this procedure until the seed weight is constant. For example, if the initial weight was 10 grams and the final weight was 6 grams the seed moisture is 40%.

To maximize ryegrass seed yield and quality, previous field experience suggests seed moisture should be below 40% moisture before swathing begins. As the ryegrass plant matures, fields can mature quickly, especially with warm, windy days of summer. When ryegrass is close to the 40% moisture level, seed moisture can drop 2% points or more per day!

## **PEST MANAGEMENT**

Grasshoppers and armyworms have been observed in isolated ryegrass fields. Check with your local agronomist or crop scout for insect population levels in your area.

### Late season leaf diseases

Late season rust expression is common in perennial ryegrass and other grasses. A common question asked this time of the year; does late season rust impact ryegrass seed yield and quality? The answer, it depends. If the ryegrass field is still green and ryegrass plants are in the seed filling stage, the answer will be yes. However, if ryegrass plants are beginning the dry down phase and the field is projected to be swathed in the next couple of weeks, a fungicide treatment may not be warranted.

Next week's newsletter will be released on July 18<sup>th</sup>, 2018.